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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,794	04/06/2001	John F. Astorino	60426-257; 2000P07668US01	8887
24500	7590	07/21/2005	EXAMINER	
SIEMENS CORPORATION INTELLECTUAL PROPERTY LAW DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			MICHALSKI, JUSTIN I	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/827,794	Applicant(s) ASTORINO ET AL.	
	Examiner Justin Michalski	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-18 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) 17,18,20,21,23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-16,22,25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/16/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I, claims 1, 4-16, 22, 25 and 26 in the reply filed on 12 January 2005 is acknowledged.

Claims 17, 18, 20, 21, 23 and 24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12 January 2005.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-16, 22, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Shibata et al. (Hereinafter "Shibata") (US Patent 5,581,619).

Regarding Claim 1, A method of noise attenuation comprising the steps of: generating a noise canceling signal from a control unit based on an environmental assumption (Shibata discloses a compensation coefficient  $C_{MNO}$  approximated to the finite impulse response, i.e. environmental assumption, Col 5, lines 4-7); generating a test sound wave to obtain actual environmental data (Generating canceling sound from speaker 9, Col. 5, line 11), assessing the environmental assumption of the control unit

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wherein assessing comprises the step of comparing the environmental assumption with actual environmental data; and altering the noise canceling signal based on the assessment (Col. 5, lines 19-26).

Regarding Claim 4, Shibata further discloses comparing the test sound wave with a model of the sound wave based on the environmental assumption (correcting the filter coefficient of adaptive filter 3, Col. 5, lines 19-26).

Regarding Claim 5, Shibata further discloses comparing the speeds of the test sound wave and the model of the sound wave (Shibata discloses speaker/microphone transmission characteristics, i.e. sound speed, Col. 5, lines 14-18).

Regarding Claim 6, Shibata further discloses the environmental assumption is assessed more than once (Fig. 1, LMS calculation circuit 6, Col. 5, lines 4-26).

Regarding Claim 7, Shibata further discloses wherein accessing occurs for a predetermined period of time (Shibata discloses accessing occurs for a finite period of time (Col. 5, lines 45-64).

Regarding Claim 8, Shibata further discloses ceasing the generation of the noise canceling signal based on a system condition (Fig. 3, Col. 5, lines 45-64).

Regarding Claim 9, it is inherent that ceasing the generation of the noise canceling signal occurs prior to the next assessment the environmental assumption of the control unit (Fig. 1, circuit 4, compensation coefficient  $C_{MNO}$ ).

Regarding Claim 10, Shibata discloses a method of noise attenuation comprising the steps of: generating a noise canceling signal from a control unit based on an environmental assumption (Fig. 1, signal from speaker 9, based on environmental

assumption coefficient  $C_{MNO}$  approximated to the finite impulse response, Col 5, lines 4-7); sensing a system condition relating to an error in noise canceling (Fig. 1, input signal through circuit 2); ceasing the generation of the noise canceling signal based on the system condition (Shibata discloses canceling sound from speaker 9, Col. 5, lines 45-64); assessing the environmental assumption of the control unit; and altering the noise canceling signal based on the assessment (Col. 5, lines 4-26).

Regarding Claim 11, Shibata further discloses comparing the environmental assumption with actual environmental data (Col. 5, lines 19-26).

Regarding Claim 12, Shibata further discloses generating a test wave to obtain actual environmental data (Signal from speaker 9 to microphone 10).

Regarding Claim 13, Shibata further discloses comparing the test sound wave with a model of the sound wave based on the environmental assumption (correcting the filter coefficient of adaptive filter 3, Col. 5, lines 19-26).

Regarding Claim 14, Shibata further discloses comparing the speeds of the test sound wave and the model of the sound wave (Shibata discloses speaker/microphone transmission characteristics, i.e. sound speed, Col. 5, lines 14-18).

Regarding Claim 15, Shibata further discloses the environmental assumption is assessed more than once (Fig. 1, LMS calculation circuit 6, Col. 5, lines 4-26).

Regarding Claim 16, Shibata further discloses wherein accessing occurs for a predetermined period of time (Shibata discloses accessing occurs for a finite period of time (Col. 5, lines 45-64).

Regarding Claim 22, Shibata further discloses the system condition related to background noise level (input to microphone 10).

Regarding Claim 25, Shibata further discloses recording the error in noise canceling (Fig.1, calculation circuit 6).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata as applied to claim 25 in view of Yoshida et al. (US Patent 5,473,702).

Shibata does not disclose ceasing the generation of the noise canceling signal for a predetermined time if a present level of the errors in noise canceling is exceeded. Yoshida discloses minimizing the power of an error signal in an adaptive noise canceller by monitoring an error signal and when the power of the error signal exceeds a threshold, the updating of the filter coefficients immediately stops (Col. 14, lines 33-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to ceasing the generation of the noise canceling signal for a predetermined time if a present level of the errors in noise canceling is exceeded in order to minimize the power of the error signal as taught by Yoshida.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (571)272-7524. The examiner can normally be reached on M-F 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM



July 13, 2005



VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600